



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,884	06/25/2001	Ari Tourunen	324-010379-US(PAR)	1180
2512	7590	11/14/2007		
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			EXAMINER MEHRA, INDER P	
			ART UNIT	PAPER NUMBER
			2617	
			MAIL DATE	DELIVERY MODE
			11/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/888,884	Applicant(s) TOURUNEN ET AL.	
	Examiner Inder P. Mehra	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/28/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8,11 and 16 is/are rejected.
- 7) ☒ Claim(s) 2-7,9,10 and 12-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to Pre-Brief Conference request dated: 4/19/2007.

Claims 1-16 are pending. Based on this amendment, claims 1, 8, 11, and 16 are amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 8, 11 rejected under 35 U.S.C. 103(a) as being unpatentable over **Forslow** (US Patent No. 6,608,832), hereinafter, Forslow, in view of **Titmuss** (US Patent No. 6,522,883), further in view of **Yang** (US Patent Application No. 2004/0095939) and **Agarwal** (US Patent no. 6,470,049).

For claims 1, 8 11 and 16, Forslow discloses "a method of allocating data transmission resources (refer to "a base station controller (BSC) 34 which manages the allocation and deallocation of radio resources", fig. 2, refer to col. 2 lines 50-55), in a packet-switched telecommunications system (51 in fig. 2) including a terminal 12 and a fixed network 35 (PSTN, refer to col. 2 lines 18-20 and lines 60-63), to which an operational entity defined for defining resources for a radio bearer (refer to "Mobile communication resources for the selected bearer and corresponding quality of service parameters may be reserved in

Art Unit: 2617

advance for each application flow (the resource reservation approach), refer to col. 5 line 65-col. 6 line 15) , the method comprising steps in order :

- defining a compression method of header fields in data packets used on the radio bearer (Forslow discloses, “The subnetwork dependence convergence protocol (SNDCP) provides segmentation and compression of headers and data between the mobile station and the SGSN in the GPRS. refer to col. 12 lines 28-34), and
- defining the radio bearer resources for the terminal on the basis of an application used by the terminal said radio bearer such manner (Forslow discloses, “the selection of a particular type of bearer and mapping of quality of service parameters, refer to col. 12 lines 35-37, further, discloses, “Mobile communication resources for the selected bearer and corresponding quality of service parameters may be reserved (defined) --- for each application flow (the resource reservation approach, refer to col. 6 lines 7-15); that said resources also comprise the capacity required by the selected compression method of header fields in data packets (Refer to “a Base Station System GPRS Protocol (BSSGP) is a flow control protocol, which allows the base station system to start and stop PDUs sent by the SGSN. This ensures that the BSS is not flooded by packets in case the radio link capacity is reduced”, refer to col. 4 lines 34-39).

Forslow discloses, as above, but does not disclose explicitly the following

Art Unit: 2617

limitation, which are disclosed by **Titmuss, Yang and Agarwal**, as follows:

- “that said resources also comprise the capacity required by the selected compression method of header fields in data packets”, (**Titmus discloses “technical capacities collectively available from the plurality of resources with which it is associated”, refer to col. 20 lines 35-40).**
- defining a compression method of header fields (**Yang discloses, “a protocol is defined to compress the RTP/UDP/IP headers and a reduction to between 2 to 5 bytes can be achieved”, refer to paragraph 0018. This results in saving bandwidth or capacity which is more than the required bandwidth)---said compression method requiring a bi-directional connection (Yang discloses, refer to paragraph 0094, “the RTP agent (up line direction) performs a role similar to the IP/PSTN gateway: for the up link direction, the voice frames from a mobile station are transmitted without any IP/UDP/RTP headers, in a way very close to the circuit-mode voice in wireless networks, e.g. in GSM (which is compression),---, up to the RTP agent which adds proper headers and sends them off to VoIP networks. On the downlink direction, the RTP agent strip off the headers and transmit them up to the mobile station (same as compression in opposite direction), refer to paragraph 0094. Further, Yang discloses, “For the downlink direction, the CD (compressor/ decompressor) in the network checks each packet to**

see if it belongs to a RTP session being compressed. If yes the RTP/UDP/IP headers are stripped off and the speech data is put into the payload of, for example, the tunnelling protocol addressed to the right mobile terminal, see paragraph 0106. Yang further, discloses, “the decompressor checks at the beginning of every sampling duration period --- to see if there is any compressed speech packet coming from RAN (same as uplink or opposite direction). If “yes” the decompressor adds IP/UDP/RTP headers on the packet. The decompressor maintains a small buffer for incoming speech packets from RAN to smooth out the jitter”, refer to paragraph 0108).

Forslow in view of Titmuss, Yang disclose explicitly, as above, the following limitation, which are disclosed by Agarwal more explicitly, as explained during interview on 8/21/2007.

- defining a compression method of header fields-----said compression method requiring a bi-directional connection; (Agarwal discloses, “It generates variable sized compressed headers; it requires a fair amount of computational power to implement; it requires bi-directional traffic---”, refer to refer to col. 4 lines 15-18).

It would have been obvious to the person of ordinary skill in the art at the time of the invention to have resources comprising the capacity required by the selected compression method of header fields in data packets, as taught by Titmuss; further, defining a compression

method of header fields, as taught by Yang and Agarwal. The motivation to do so being that it provides optimization of transmission resources and reduction of bytes.

Allowable Subject Matter

4. Claims 2-7, 9-10, and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments with respect to claims 1-16 have been considered, but they are not persuasive.

Applicant argues "The noted claims are amended to recite defining a compression of header fields "requiring a bi-directional connection." (see e.g. page 9, paragraph [0026]) This feature is not disclosed or suggested by the combination of Forslow, Titmus and Yang.

Applicant, further, argues, " Forslow is silent as to the capacity of the defined header field compression method.

In response, examiner states that Yang discloses "Yang discloses, "a protocol is defined to compress the RTP/UDP/IP headers and a reduction to between 2 to 5 bytes (same as capacity) can be achieved", refer to paragraph 0018. This results in saving bandwidth or capacity which is more than the required bandwidth. Further, for many radio networks in which the radio bearer capacity is designed for circuit voice service so the link layer PDU size is designed to match voice payload.

Applicant argues “Furthermore, the combination of references does not disclose or suggest that a header compression method is defined first and then the radio bearer resources for the terminal are defined”.

In response, Examiner states, “Yang discloses, “General benefits of the arrangement are that there is higher compression gain and saving of resources (whis is redefinition of resources); that the system operates when the round-trip-time between compression and decompression is long; and that the benefits from IP-based call signalling can be kept, refer to paragraph 0049. Further, examiner states that Forslow discloses in continuation, “selection of particular type of bearer and mapping of quality of service parameters may be performed”, refer to col. 12 lines 36-38

It is logical to compress header first in order to save bytes and then evaluate/define radio bearer resources which comprise the capacity required by the defined compression method of header field.

“ Titmus discloses “technical capacities collectively available from the plurality of resources with which it is associated”, refer to col. 20 lines 35-40.

AS explained earlier, examiner, further states that Forslow discloses “segmentation and compression headers, refer to col. 12 lines 30-32. Further, examiner states that Forslow discloses in continuation, “selection of particular type of bearer and mapping of quality of service parameters may be performed”, refer to col. 12 lines 36-38. Examiner, further states that **Yang discloses, “a protocol is defined to compress the RTP/UDP/IP headers and**

Art Unit: 2617

a reduction to between 2 to 5 bytes can be achieved”, refer to paragraph 0018. This results in saving bandwidth or capacity which is more than the required bandwidth”.

Applicant argues, refer to “Pre-Appeal **Brief Conference review**” dated 4/19/2007, “claims 1, 8, 11 and 16 are not unpatentable over Forslow in view of Titmuss and Yang under 35 U.S.C. §103(a), because the combination of references does not disclose or suggest defining a compression method of header fields in data packets used on the radio bearer where the "compression method requires a bi-directional connection" as recited in Applicant's claims. As stated in MPEP §2142 et seq., a prima facie case of obviousness under 35 U.S.C. §103(a) requires that the combination of references teach all of the claimed limitations. The combination of Forslow, Titmuss and Yang does not disclose or suggest a "a compression method requiring a bi-directional connection" as is recited and claimed by Applicant”.

As explained in Examiner’s Interview dated 8/29/07, examiner states that **Forslow in view of Titmuss, Yang disclose explicitly, as above, the following limitation, which are disclosed by Agarwal more explicitly, as explained during interview on 8/21/2007.**

- defining a compression method of header fields-----said compression method requiring a bi-directional connection; (Agarwal discloses, “**It generates variable sized compressed headers; it requires a fair amount of computational power to implement; it requires bi-directional traffic---**”, refer to refer to col. 4 lines 15-18).

In light of above explanation, arguments by applicant are not persuasive.

Art Unit: 2617

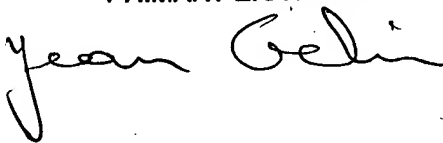
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P. Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEAN GELIN
PRIMARY EXAMINER



Inder Pal Mehra 11/1/07
Inder P Mehra
Examiner
Art Unit 2617